

FIG. 1

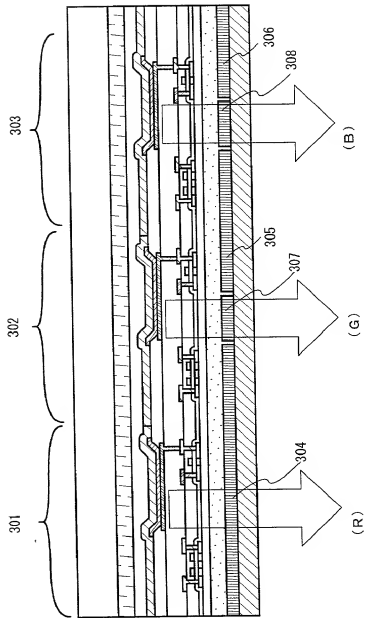


FIG. 2

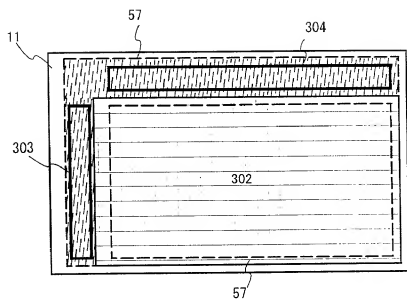
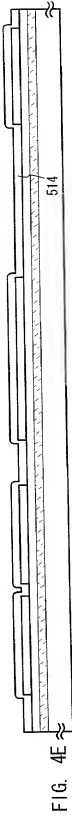
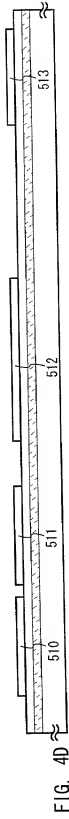
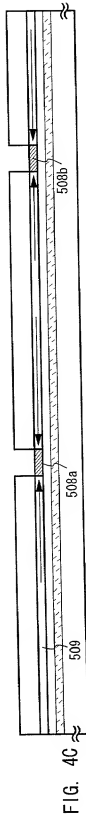
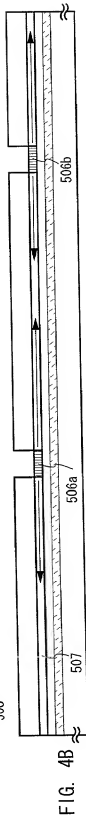
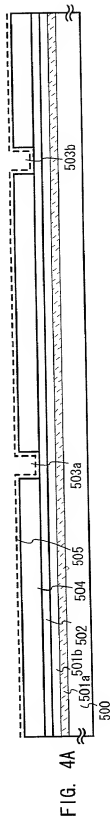


FIG. 3



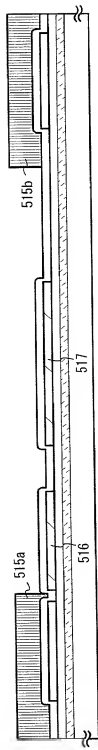


FIG. 5A

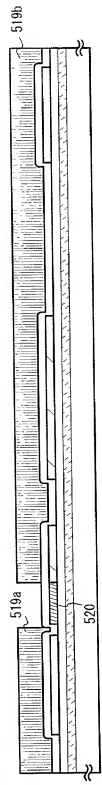


FIG. 5B

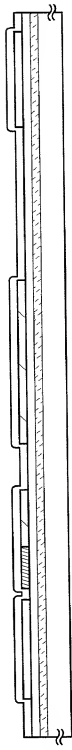


FIG. 5C

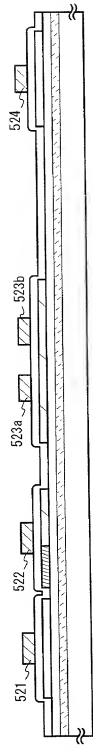


FIG. 5D

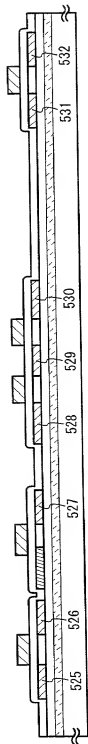


FIG. 6A

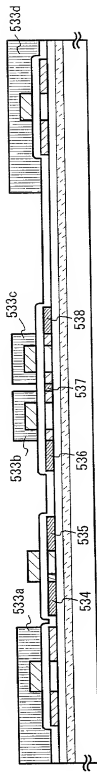


FIG. 6B

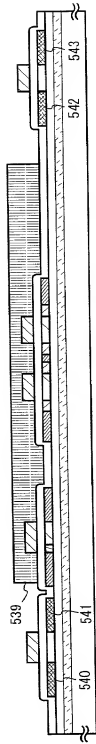


FIG. 6C

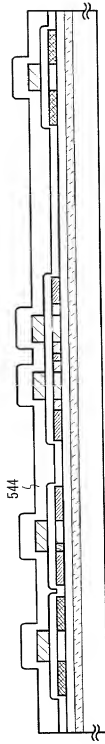


FIG. 6D

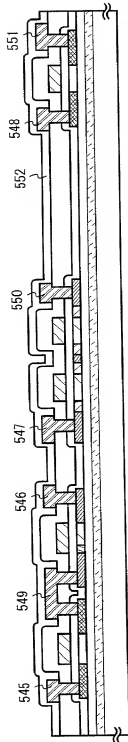


FIG. 7A

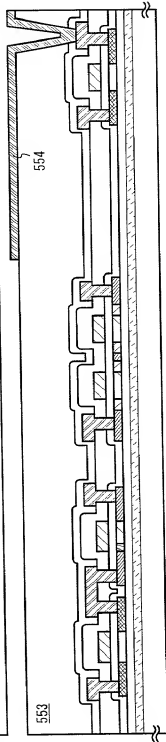


FIG. 7B

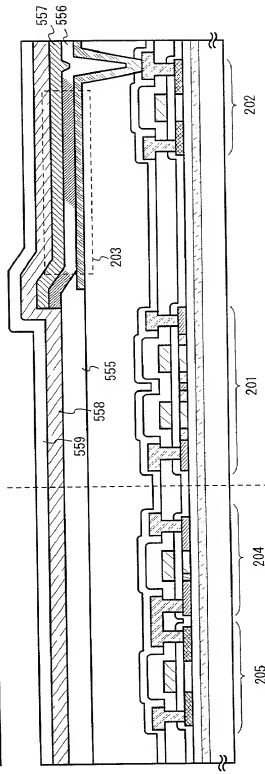


FIG. 7C

FIG. 8A

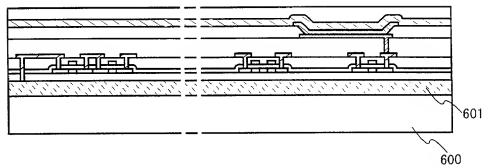


FIG. 8B

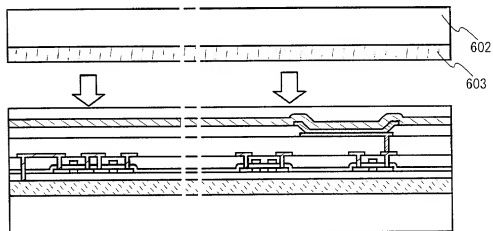
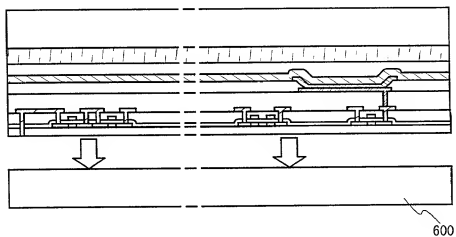


FIG. 8C





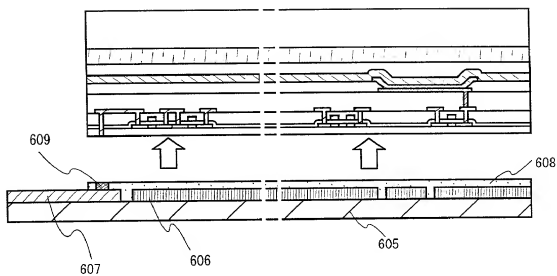


FIG. 9A

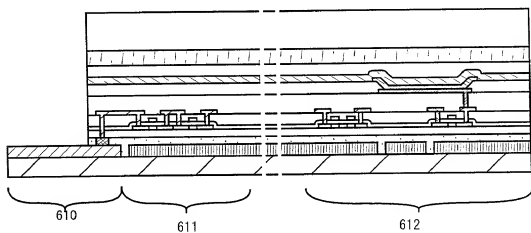


FIG. 9B

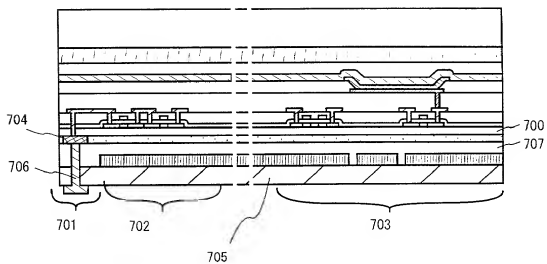


FIG. 10A

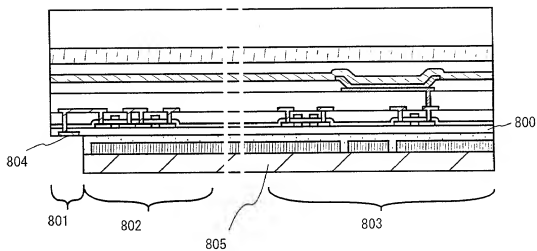


FIG. 10B

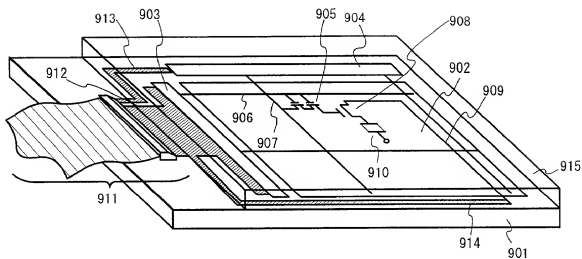


FIG. 11

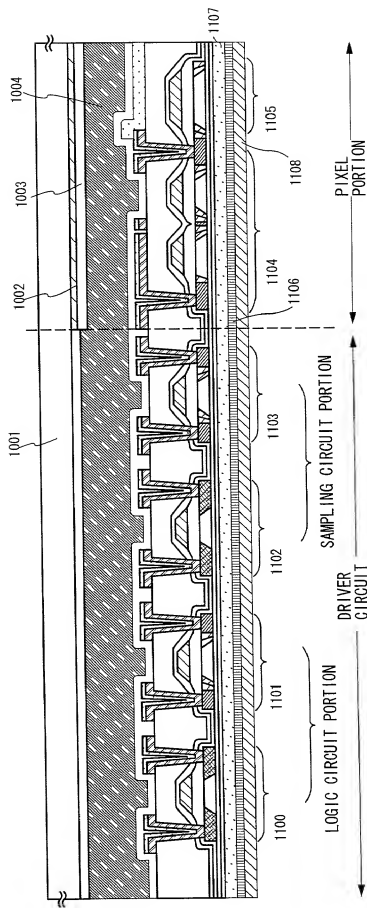


FIG. 12

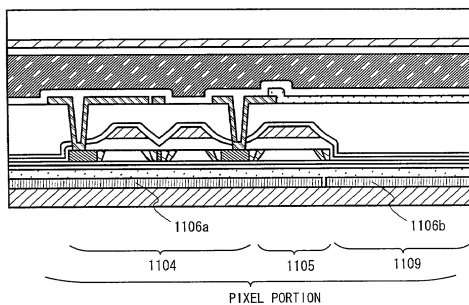


FIG. 13

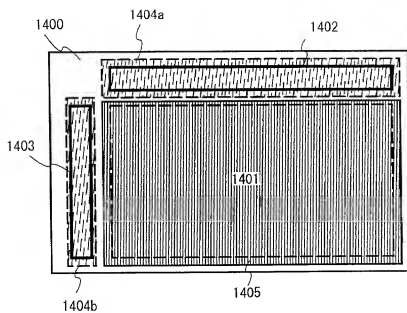


FIG. 14A

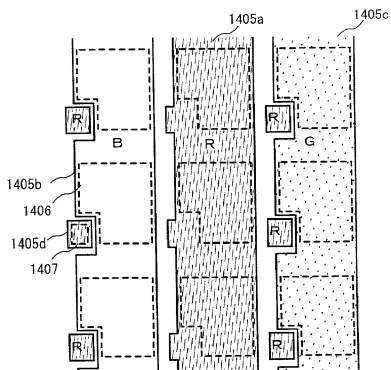


FIG. 14B

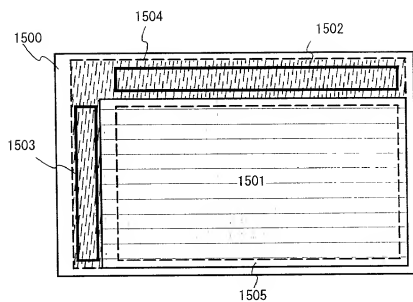


FIG. 15A

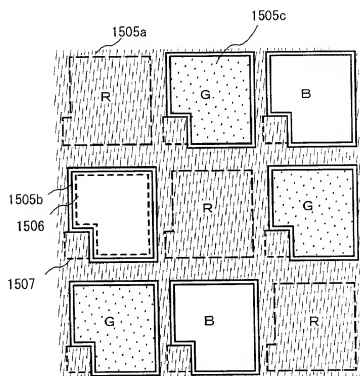


FIG. 15B

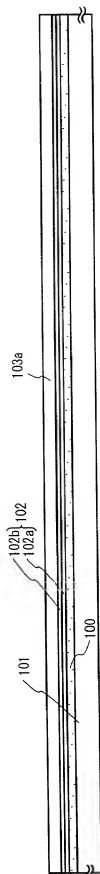


FIG. 16A

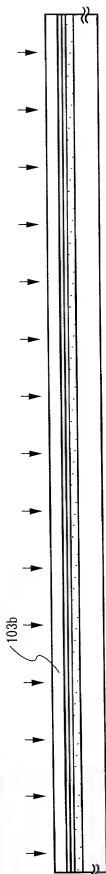


FIG. 16B

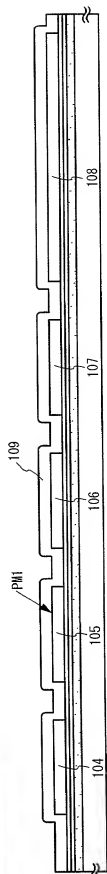


FIG. 16C

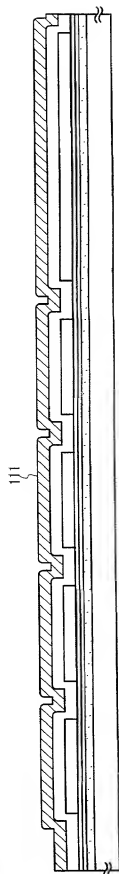


FIG. 16D



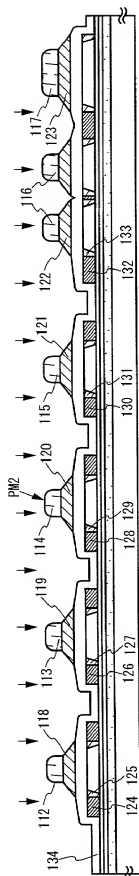


FIG. 17A

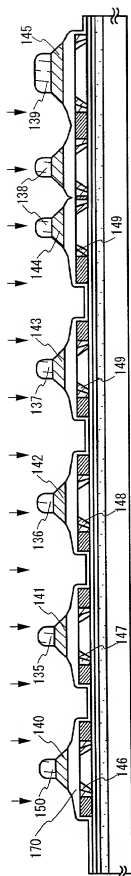


FIG. 17B

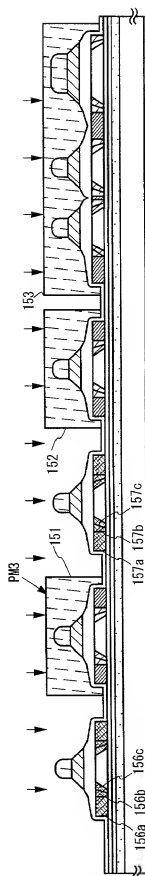


FIG. 17C

This cross-sectional view illustrates the layered structure of the device. The top surface is defined by a PM6 layer (180) and a PM5 layer (181). Below these, a series of gate electrodes are formed, including PM6 (169b), PM5 (169a), PM4 (163b), and PM3 (163a). The device is divided into three main functional regions: the LOGIC CIRCUIT PORTION on the left, the SAMPLING CIRCUIT PORTION in the center, and the PIXEL PORTION on the right. The LOGIC CIRCUIT PORTION includes layers 159, 160a, 160b, 165a, 165b, 166a, 166b, 167a, 167b, 168a, 168b, 169a, 169b, 170a, 170b, 171a, 171b, 172a, 172b, 173a, 173b, 174a, 174b, 175a, 175b, 176a, 176b, 177a, 177b, 178a, 178b, 179a, 179b, 180a, 180b, 181a, 181b, 182a, 182b, 183a, 183b, 184a, 184b, 185a, 185b, 186a, 186b, 187a, 187b, 188a, 188b, 189a, 189b, 190a, 190b, 191a, 191b, 192a, 192b, 193a, 193b, 194a, 194b, 195a, 195b, 196a, 196b, 197a, 197b, 198a, 198b, 199a, 199b, 200a, 200b, 201a, 201b, 202a, 202b, 203a, 203b, 204a, 204b, 205a, 205b, 206a, 206b, 207a, 207b, 208a, 208b, 209a, 209b, 210a, 210b, 211a, 211b, 212a, 212b, 213a, 213b, 214a, 214b, 215a, 215b, 216a, 216b, 217a, 217b, 218a, 218b, 219a, 219b, 220a, 220b, 221a, 221b, 222a, 222b, 223a, 223b, 224a, 224b, 225a, 225b, 226a, 226b, 227a, 227b, 228a, 228b, 229a, 229b, 230a, 230b, 231a, 231b, 232a, 232b, 233a, 233b, 234a, 234b, 235a, 235b, 236a, 236b, 237a, 237b, 238a, 238b, 239a, 239b, 240a, 240b, 241a, 241b, 242a, 242b, 243a, 243b, 244a, 244b, 245a, 245b, 246a, 246b, 247a, 247b, 248a, 248b, 249a, 249b, 250a, 250b, 251a, 251b, 252a, 252b, 253a, 253b, 254a, 254b, 255a, 255b, 256a, 256b, 257a, 257b, 258a, 258b, 259a, 259b, 260a, 260b, 261a, 261b, 262a, 262b, 263a, 263b, 264a, 264b, 265a, 265b, 266a, 266b, 267a, 267b, 268a, 268b, 269a, 269b, 270a, 270b, 271a, 271b, 272a, 272b, 273a, 273b, 274a, 274b, 275a, 275b, 276a, 276b, 277a, 277b, 278a, 278b, 279a, 279b, 280a, 280b, 281a, 281b, 282a, 282b, 283a, 283b, 284a, 284b, 285a, 285b, 286a, 286b, 287a, 287b, 288a, 288b, 289a, 289b, 290a, 290b, 291a, 291b, 292a, 292b, 293a, 293b, 294a, 294b, 295a, 295b, 296a, 296b, 297a, 297b, 298a, 298b, 299a, 299b, 300a, 300b, 301a, 301b, 302a, 302b, 303a, 303b, 304a, 304b, 305a, 305b, 306a, 306b, 307a, 307b, 308a, 308b, 309a, 309b, 310a, 310b, 311a, 311b, 312a, 312b, 313a, 313b, 314a, 314b, 315a, 315b, 316a, 316b, 317a, 317b, 318a, 318b, 319a, 319b, 320a, 320b, 321a, 321b, 322a, 322b, 323a, 323b, 324a, 324b, 325a, 325b, 326a, 326b, 327a, 327b, 328a, 328b, 329a, 329b, 330a, 330b, 331a, 331b, 332a, 332b, 333a, 333b, 334a, 334b, 335a, 335b, 336a, 336b, 337a, 337b, 338a, 338b, 339a, 339b, 340a, 340b, 341a, 341b, 342a, 342b, 343a, 343b, 344a, 344b, 345a, 345b, 346a, 346b, 347a, 347b, 348a, 348b, 349a, 349b, 350a, 350b, 351a, 351b, 352a, 352b, 353a, 353b, 354a, 354b, 355a, 355b, 356a, 356b, 357a, 357b, 358a, 358b, 359a, 359b, 360a, 360b, 361a, 361b, 362a, 362b, 363a, 363b, 364a, 364b, 365a, 365b, 366a, 366b, 367a, 367b, 368a, 368b, 369a, 369b, 370a, 370b, 371a, 371b, 372a, 372b, 373a, 373b, 374a, 374b, 375a, 375b, 376a, 376b, 377a, 377b, 378a, 378b, 379a, 379b, 380a, 380b, 381a, 381b, 382a, 382b, 383a, 383b, 384a, 384b, 385a, 385b, 386a, 386b, 387a, 387b, 388a, 388b, 389a, 389b, 390a, 390b, 391a, 391b, 392a, 392b, 393a, 393b, 394a, 394b, 395a, 395b, 396a, 396b, 397a, 397b, 398a, 398b, 399a, 399b, 400a, 400b, 401a, 401b, 402a, 402b, 403a, 403b, 404a, 404b, 405a, 405b, 406a, 406b, 407a, 407b, 408a, 408b, 409a, 409b, 410a, 410b, 411a, 411b, 412a, 412b, 413a, 413b, 414a, 414b, 415a, 415b, 416a, 416b, 417a, 417b, 418a, 418b, 419a, 419b, 420a, 420b, 421a, 421b, 422a, 422b, 423a, 423b, 424a, 424b, 425a, 425b, 426a, 426b, 427a, 427b, 428a, 428b, 429a, 429b, 430a, 430b, 431a, 431b, 432a, 432b, 433a, 433b, 434a, 434b, 435a, 435b, 436a, 436b, 437a, 437b, 438a, 438b, 439a, 439b, 440a, 440b, 441a, 441b, 442a, 442b, 443a, 443b, 444a, 444b, 445a, 445b, 446a, 446b, 447a, 447b, 448a, 448b, 449a, 449b, 450a, 450b, 451a, 451b, 452a, 452b, 453a, 453b, 454a, 454b, 455a, 455b, 456a, 456b, 457a, 457b, 458a, 458b, 459a, 459b, 460a, 460b, 461a, 461b, 462a, 462b, 463a, 463b, 464a, 464b, 465a, 465b, 466a, 466b, 467a, 467b, 468a, 468b, 469a, 469b, 470a, 470b, 471a, 471b, 472a, 472b, 473a, 473b, 474a, 474b, 475a, 475b, 476a, 476b, 477a, 477b, 478a, 478b, 479a, 479b, 480a, 480b, 481a, 481b, 482a, 482b, 483a, 483b, 484a, 484b, 485a, 485b, 486a, 486b, 487a, 487b, 488a, 488b, 489a, 489b, 490a, 490b, 491a, 49

FIG. 18B

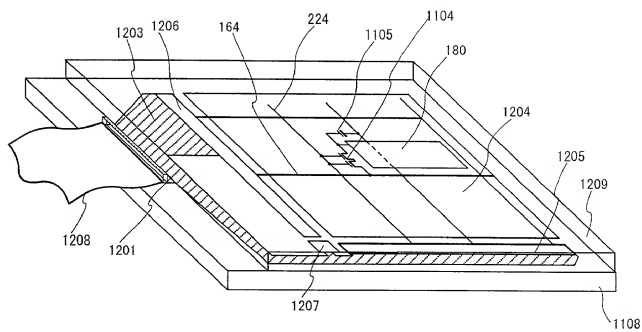


FIG. 19

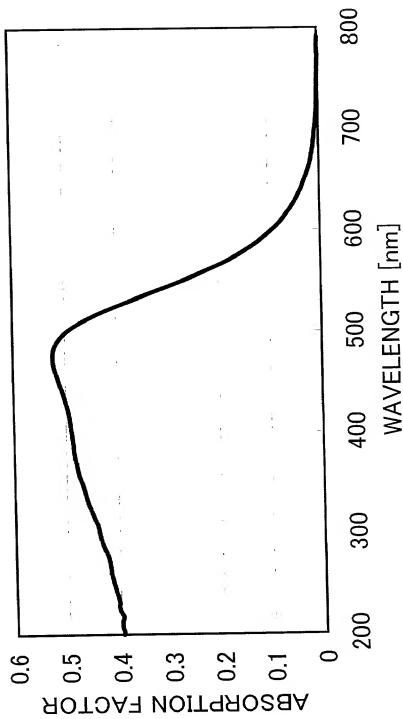


FIG. 20

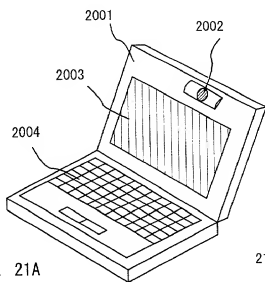


FIG. 21A

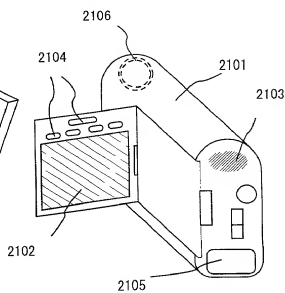


FIG. 21B

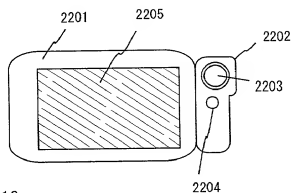


FIG. 21C

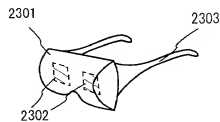


FIG. 21D

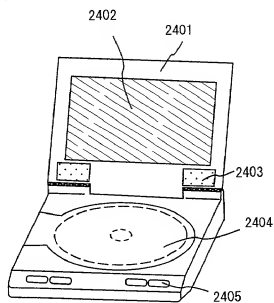


FIG. 21E

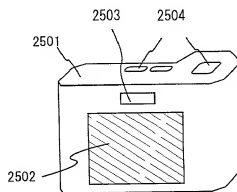


FIG. 21F

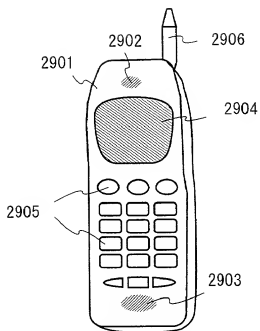


FIG. 22A

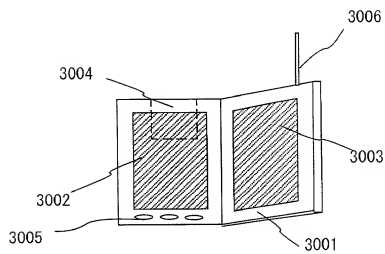


FIG. 22B

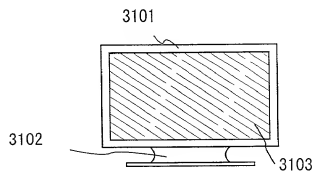


FIG. 22C